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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,328	07/08/2003	Andrew C. McNeil	SC12592ZP	9349
7590	08/02/2004		EXAMINER	
John A. Fortkort P.C. 4512 Court of St. James Austin, TX 78730			CHAPMAN JR, JOHN E	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,328	MCNEIL ET AL.	
	Examiner	Art Unit	
	John E Chapman	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 June 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 20-22,24 and 25 is/are allowed.
- 6) Claim(s) 1,2,6,7,10,12,13,16-19 and 26-42 is/are rejected.
- 7) Claim(s) 3-5,8,9,11,14,15 and 23 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form. “Perpendicular” is synonymous with “orthogonal.”

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6, 10, 16, 17 and 28-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, since the first and second set of sense fingers are aligned along first and second axes that are parallel to a first plane (claim 5), it is not possible for one of them to be perpendicular to the first plane.

Regarding claim 10, there is no antecedent basis for “said first plane” in line 3.

Regarding claim 16, there is insufficient antecedent basis for “planes of symmetry” in line 4. Note that claim 14 does not recite a plurality of planes of symmetry.

Regarding claim 17, there is no proper antecedent basis for “the line of symmetry” in line

2. Note that claim 14 recites a plane of symmetry.

Regarding claim 28, there is no antecedent basis for “said first plane” in line 3.

Regarding claim 29, there is no antecedent basis for “the sacrificial layer” in line 8.

Regarding claim 38; it is not clear that the disclosed device has two planes of mirror symmetry about a plane orthogonal to a major surface of the second conductive layer. Rather, it would appear two planes of mirror symmetry in Fig. 4 are about an axis perpendicular to the second conductive layer. Note claim 39.

Regarding claim 40, there is no antecedent basis for “said first and second plates” in line 2.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 7, 10, 13, 18 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Okada (6,159,761).

Okada discloses a transducer comprising a proof mass 50 for sensing acceleration in three orthogonal directions (col. 11, line 60, to col. 12, line 1).

7. Claims 1, 2, 7, 12 and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Okada et al. (5,962,787).

Okada discloses a transducer comprising a proof mass 40 that is responsive to acceleration in three orthogonal directions.

8. Claims 1, 2, 12 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kvisteroey et al.

Kvisteroey et al. disclose a transducer adapted to sense acceleration in two mutually perpendicular directions (col. 3, lines 14-16) comprising an unbalanced proof mass 4 (col 3, lines 55-57, and claim 23).

Regarding claim 2, proof mass 4 is a single proof mass, consisting of a central portion 6 and an outer portion 5. Alternatively, inner mass 6 comprises a single proof mass that senses acceleration in two mutually perpendicular directions.

Regarding claim 12, inner springs 7-10 and outer springs 2 and 3 comprise a suspension that enables the inner mass 6 to move in two mutually orthogonal directions.

Regarding claim 18, inner springs 7-10 are arranged in two planes of symmetry.

9. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kvisteroey et al.

Art Unit: 2856

Kvisteroey et al. disclose two conductive plates in Fig. 6(b) mounted on an upper substrate. The only difference between the claimed invention and the prior art consists in mounting the conductive plates on the lower substrate, which would have been an obvious rearrangement of elements, since placing conductive plates on the lower substrate is well known in the art and it would have been obvious on one having ordinary skill in the art that placing the conductive plates on the lower substrate would function in the same manner to produce the same result.

10. Claim 26 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Selvakumar et al.

Note Fig. 1.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selvakumar et al. in view of Behin et al.

The only difference between the claimed invention and the prior art consists in providing a second set of sense fingers orthogonal to the first set. Behin et al. discloses a bi-axial rotating device in Fig. 5 that may comprise an inertial sensor (col. 11, line 66). It would have been obvious to provide the transducer of Selvakumar et al. with a second set of sense fingers in order to measure angular acceleration as well as linear acceleration.

12. Claims 20-22, 24 and 25 are allowed.

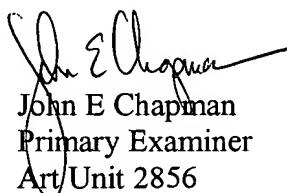
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13. Claims 3-5, 8, 9, 11, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cole discloses an accelerometer comprising an unbalance proof mass 50.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John E Chapman
Primary Examiner
Art Unit 2856